PRIMARY USE: Erosion control.

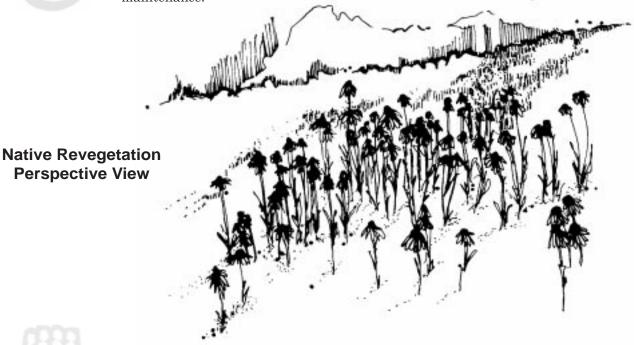
ADDITIONAL USES: Removal of nutrients and sediment from runoff; minimization of runoff volume.

NATIVE REVEGETATION -GRASSES, LEGUMES, AND FORBS

What is it? A technique for quickly covering the surface of a disturbed or degraded site. Native Revegetation is different from temporary reseeding, which is a practice used to provide short term cover for a site scheduled for future disturbance.



Seeding with native grasses, legumes (nitrogen fixing plants) and forbs (broad leaved plants, including wildflowers) is an inexpensive method to quickly cover a site. Native grasses and forbs are adapted to regional conditions of climate and disease and so are relatively low maintenance.



Limitations

Not as effective as trees and shrubs for nutrient removal. Mixtures sold for temporary seeding will probably provide coverage more quickly. Native grasses, legumes, and forbs may compete with trees and shrubs for nutrients and water, thus slowing succession.



Grass, legume, and forb seeds; mulch and/or netting.



Revegetation, as distinguished from temporary seeding, is used for the long term restoration of a degraded site. Once established, native annuals will reseed themselves, although they may require protection from exotic or invader species. If left unmanaged, natural succession will usually result in the invasion of shrubs and trees. If managed by mowing and/or burning, the native annuals and perennials will persist. Some species of native grasses, legumes, and forbs are relatively easy to grow. These frequently dominate the mixtures used for roadside plantings. Other species may require more intensive management to ensure establishment but will provide a more complete and natural mixture. Seed mixtures can be prepared that will be appropriate for wet, dry, or mesic sites and for a variety of sun exposure regimes.

Source: Riley, A.L. <u>Restoring Streams in Cities</u>. Island Press. 1997; Packard, S. and C. Mutel. <u>The Tallgrass Restoration Handbook</u>. Island Press. 1997.

NATIVE REVEGETATION - GRASSES, LEGUMES, AND FORBES

Additional Information:

Seed Stock

Many suppliers advertise native grass, legume, and forb seed. Check the suppliers reputation before making purchases. Purchase a mixture appropriate for the conditions at the site. Restorationists frequently use hand collected seed to obtain particular species and to ensure that the stock is native to the area. Processing (pre-soaking, scarification, etc.) of some species is necessary for successful germination.

Site Preparation and Planting Plowing or chemical treatment was common in the past to "clear the way" for restored native species. Recently, interseeding, the practice of sowing native seed in amongst existing grasses, has made this practice unnecessary in many instances. For difficult to remove or aggressive exotics, complete clearing of the site may still be advisable. Many native grasses, legumes, and forbs appear to do as well or better when started without the removal of existing vegetation. Mowing and/or burning, however, may be a necessary step if shading or woody shrubs are a problem at the site. In some habitats and for some species, seed may need to be added for multiple years, since conditions for successful seed set, germination, and survival may not occur each year. Mowing should be repeated whenever competing species reach 1-1.5 ft (304-457 mm) heights.

When interseeding, it is best to sow seeds in fall or early spring. Legume seeds are generally innoculated with nitrogen fixing bacteria to enhance growth. Seeds may be broadcast by hand. In large areas, machine seeding can be used. On slopes, hydroseeding may be advisable. After sowing, seeds should be incorporated into the soil using hand raking, harrowing, disking, or drilling. Note that the mechanical techniques require a very light touch to avoid over-burying the seeds. A variety of seed drills is available from different manufacturers. As a rule-of-thumb, seeds should be covered by a layer of soil twice their thickness. An alternative to burying the seeds is to sow in late fall. The objective is to wait until much of the migratory bird population has moved through and then allow the winter weather to "work" the seed into the earth.

When completely clearing a site prior to seeding, it is best to start as early in spring as the ground can be worked. Use a light duty cultivator or harrow to till the ground no deeper than 2 in (51 mm). Tillage should be repeated each time a weed crop reaches 2 in (51 mm) height until the weed seed stock is exhausted (usually every 3 weeks through the spring). Next pack with a water filled roller at least twice over the site, with the second pass at right angles to the first. If broadcasting seed, pack afterwards. If using a specialized seed drill, pack prior to seeding. A layer of mulch will help to reduce water loss and enhance vegetation, but it is difficult to mulch large sites.

Source: Riley, A.L. <u>Restoring Streams in Cities</u>. Island Press. 1997; Packard, S. and C. Mutel. <u>The Tallgrass Restoration Handbook</u>. Island Press. 1997.